

Amendments to the Claims: This listing of claims will replace all prior versions, and listings, of claims in the application

Listing of Claims:

1. (Currently Amended) ~~System~~ A system for controlling the operation of presence detection devices in ~~an automobile~~ a motor vehicle, which comprises in combination:

a) external presence detection means ~~(4)~~ for detecting the entry of objects in a certain observation area outside said ~~automobile~~ vehicle;

b) at least one power supply ~~(5)~~ for supplying at least said external presence detection means ~~(4)~~;

c) an electronic system ~~(6)~~ including at least means for processing and analyzing first input signals obtained by said external presence detection means ~~(4)~~ and which produces first output signals according to the result of said analysis, and

d) condition detection means ~~(7)~~ of at least one closing device of at least one door of said automobile, associated and cooperating with said electronic system ~~(6)~~,

~~characterized in that~~ wherein said power supply ~~(5)~~ is controlled by said electronic system ~~(6)~~, according to the opening and closing sequence of at least said closing device of said door, of which there is at least one, of said ~~automobile~~ vehicle, obtained by said condition detection means ~~(7)~~.

2. (Currently Amended) ~~Control~~ The control system according to claim 1, ~~characterized in that it also comprises~~ further comprising internal presence detection means ~~(8)~~, which are associated with and cooperate with said electronic system ~~(6)~~ to control said power supply ~~(5)~~, ~~also according to the~~ a presence or absence of people inside the ~~automobile~~ vehicle.

3. (Currently Amended) The control ~~Control~~ system according to claim 2, ~~characterized in further comprising~~ that it also comprises tilt detection means ~~(9)~~, which are associated with and cooperate with said condition detection means ~~(7)~~ of at said least one closing device of at said least one ~~automobile~~ vehicle door and said internal presence detection means ~~(8)~~, to produce second input signals for said electronic system ~~(6)~~, ~~also according to the vehicle's tilt with~~

respect to ~~the a~~ plane of the ground on which said vehicle is standing, conditioned by various circumstances such as load, presence of passengers or braking, ~~thanks to~~ based on said tilt detection means ~~(9)~~.

4. (Currently Amended) The control ~~Control~~-system according to claim 3, ~~characterized in that~~ wherein said tilt detection means ~~(9)~~ are associated with and cooperate with said electronic system ~~(6)~~, when the vehicle starts to move or once it has stopped, to vary the area of observation to be covered by said external presence detection means ~~(4)~~, according to the vehicle's tilt with respect to the plane of the ground on which said vehicle is standing.

5. (Currently Amended) The control ~~Control~~-system according to claim 3, ~~characterized in that~~ wherein said electronic system ~~(6)~~ comprises at least one timer and/or at least one remote control, which are associated with and cooperate with at least said condition detection means ~~(7)~~ of said closing device of said automobile door, to control said power supply ~~(5)~~.

6. (Currently Amended) The control ~~Control~~-system according to claim 2, ~~3 or 5,~~ ~~characterized in that~~ wherein the control of said power supply ~~(5)~~ includes activating or deactivating said power supply by means of said electronic system ~~(6)~~.

7. (Currently Amended) The control ~~Control~~-system according to claim 1, ~~characterized in that~~ wherein said external presence detection means ~~(4)~~ comprises at least one electromagnetic detection device.

8. (Currently Amended) The control ~~Control~~-system according to claim 7, ~~characterized in that~~ wherein said electromagnetic detection device comprises at least one element ~~in a selected from the group including consisting of~~ a camera, an infra-red system, a radar system and an ultrasound system, or ~~a any~~ combination thereof.

9. (Currently Amended) The control ~~Control~~-system according to claim 1, ~~characterized in that~~ wherein said external presence detection means ~~(4)~~ includes at least one magnetic field distortion detection device.

10. (Currently Amended) The control ~~Control~~-system according to claim 7, ~~characterized in that~~ wherein said external presence detection means ~~(4)~~ also includes at least one magnetic field distortion detection device in combination with said electromagnetic detection device, of which there is at least one.

11. (Currently Amended) ~~The control~~ Control-system according to claim 10, ~~characterized in that~~wherein it includes at least two of said electromagnetic detection devices and/or at least two of said magnetic field distortion detection devices, one on each side of the automobile.

12. (Currently Amended) ~~The control~~ Control-system according to claim ~~8, 9, 10 or 11,~~ characterized in thatwherein the electromagnetic detection devices and/or the magnetic field distortion detection devices are mounted, at least partially, in respective external rear-view mirror housings on said automobile.

13. (Currently Amended) ~~The control~~ Control-system according to claim 1, ~~8, 9 or 10,~~ characterized in thatwherein said external area of observation exterior covers at least one blind spot.

14. (Currently Amended) ~~The control~~ Control-system according to claim 2, ~~characterized in that~~wherein said internal presence detection means ~~(8)~~ include at least one device ~~in a selected from the group including consisting of~~ at least one weight sensor, at least one capacity sensor, arranged on at least one automobile seat, at least one infra-red detector, at least one microwave detector and at least one camera, arranged inside the vehicle, or ~~a~~ any combination thereof.

15. (Currently Amended) ~~Control~~ A control method for the operation of presence detection devices in ~~an automobile~~ a motor vehicle, comprising:

detecting, using an external presence detection means, ~~(4)~~ for detecting the entry of objects in a certain area of observation external to said vehicle,

powering, with at least one power supply, ~~(5)~~ for powering at least said external presence detection means ~~(4)~~,

processing and analyzing, with an electronic system, ~~(6)~~ including at least means for processing and analyzing first input signals obtained by said external presence detection means, ~~(4)~~ and which produces said electronic system producing first output signals according to the result of said analysis, and

determining a condition, using a condition detection means, ~~(7)~~ of at least one closing device of at least one automobile door, which are associated with and cooperate with said electronic system ~~(6)~~, and

characterized in that it comprises controlling said power supply (5), by means of said electronic system (6), according to the opening and closing sequence of at least said closing device of said ~~automobile~~ vehicle door, of which there is at least one, based on said condition obtained by said condition detection means (7).

16. (Currently Amended) The control ~~Control~~ method according to claim 15, ~~characterized in that it comprises~~ further comprising controlling said power supply (5), by means of said electronic system (6), ~~also according to the~~ a presence or absence of people inside the ~~automobile~~ vehicle, using an internal presence detection means (8), which are associated with and cooperate with said electronic system (6).

17. (Currently Amended) The control ~~Control~~ method according to claim 15 ~~or 16~~, ~~characterized in that it comprises~~ further comprising controlling said power supply (5), by means of said electronic device (6), also according to the condition, activated or deactivated, of the vehicle ignition.

18. (Currently Amended) The control ~~Control~~ method according to claim 17 ~~when subordinate to claim 15~~, ~~characterized in that~~ wherein, when said power supply (5) and the vehicle ignition are deactivated and the vehicle itself is also stopped, it comprises the following steps:

- a) detecting a door opening action or opening and closing sequence,
- b) ~~activate~~ activating said power supply (5) following said detections,
- c) ~~activate~~ activating a timer included in said electronic system (6), when closing said door, for a time T1, maintaining power supply (5) activated, and
- d) ~~deactivate~~ deactivating said power supply (5) if after said time T1 the vehicle ignition is still not activated.

19. (Currently Amended) The control ~~Control~~ method according to claim 18, ~~characterized in that it also comprises~~ further comprising, after said step d), the following steps:

- e) ~~reactivate~~ reactivating said power supply (5) if step d) has been performed and a second door opening action or opening and closing sequence has been detected,

f) ~~reactivate~~reactivating said timer, for a time T2, when closing the door, and

g) maintaining said power supply ~~(5)~~ activated if after said time T2 the vehicle ignition has been activated.

20. (Currently Amended) ~~The control~~ Control-method according to claim 19, ~~characterized in that~~wherein said times T1 and T2 are equal.

21. (Currently Amended) ~~The control~~ Control-method according to claim 17 ~~when subordinate to claim 15, characterized in that~~wherein, when said power supply ~~(5)~~ is activated and the vehicle ignition is deactivated and the vehicle itself is also stopped, it comprises the following steps:

a) detecting a door opening and closing sequence,

b) ~~activate~~activating a timer incorporated in electronic system ~~(6)~~, for a time T1, and

c) ~~deactivate~~deactivating said power supply ~~(5)~~ if after said time T1 the vehicle ignition has still not been activated.

22. (Currently Amended) ~~The control~~ Control-method according to claim 21, ~~characterized in that it also comprises further comprising~~, after said step b), the following step, as an alternative to step c):

d) ~~deactivate~~deactivating the timer if a second door opening action has been detected,

23. (Currently Amended) ~~The control~~ Control-method according to claim 22, ~~characterized in that it also comprises further comprising~~, after said step d), the following step:

e) ~~reactivate~~reactivating the timer if a second door closing action has been detected.

24. (Currently Amended) ~~The control~~ Control-method according to claim ~~17~~32 ~~when subordinate to claim 16, characterized in that~~wherein when power supply ~~(5)~~ and the vehicle ignition are deactivated and the vehicle itself is stopped, it comprises the following steps:

a) detecting a door opening action,

b) detecting the a presence of at least one person inside the vehicle, using the said internal presence detection means-(8),

c) detecting a closing action of said door, and

d) ~~activate~~activating said power supply (5)-following said detections.

25. (Currently Amended) The control ~~Control~~-method according to claim 1732 ~~when subordinate to claim 16, characterized in that~~wherein when said power supply (5) is activated, the vehicle ignition is deactivated and the vehicle itself is stopped, it comprises the following steps:

a) detecting a door opening action,

b) detecting the absence of a person who was inside the vehicle, using said internal presence detection means-(8),

c) detecting a closing action of said door, and

d) ~~deactivate~~deactivating said power supply (5)-following said detections.

26. (Currently Amended) The control ~~Control~~-method according to claim 1732 ~~when subordinate to claim 16, characterized in that it also comprises~~ further comprising producing second input signals for electronic system-(6), also according to the vehicle's tilt with respect to the plane of the ground on which the vehicle is standing, conditioned by various circumstances such as load, presence of passengers or braking, using for this purpose tilt detection means-(9), which are associated with and cooperate with said condition detection means (7)-of at least one closing device of at least one automobile door and said internal presence detection means-(8).

27. (Currently Amended) The control ~~Control~~-method according to claim 26, ~~characterized in that it also comprises~~ further comprising varying the area of observation to be covered by said external presence detection means-(4), when the vehicle starts to move or once it has stopped, according to the vehicle's tilt with respect to the plane of the ground on which the vehicle is standing, using for this purpose said tilt detection means-(9), which are associated with and cooperate with said electronic system-(6).

28. (Currently Amended) ~~The control~~ Control-method according to claim 26, ~~characterized in that it comprises~~ further comprising detecting the vehicle's tilt when the ignition is deactivated, the vehicle is stopped and a door opening action has been detected.

29. (Currently Amended) ~~The control~~ Control-method according to claim 28, ~~characterized in that it comprises~~ further comprising detecting the vehicle's tilt when the ignition is activated and the vehicle is running.

30. (Currently Amended) ~~The control~~ Control-method according to claim 17 ~~when subordinate to claim 15, characterized in that~~ wherein when said power supply (5) and the vehicle ignition are deactivated and the vehicle itself is also stopped, it comprises the following steps:

- a) detecting an activation signal from a remote control, or key, included in electronic system-~~(6)~~,
- b) detecting a door opening and closing sequence, and
- c) ~~activate~~ activating said power supply (5)-following said detections.

31. (Currently Amended) ~~The control~~ Control-method according to claim 17 ~~when subordinate to claim 15, characterized in that~~ wherein when power supply (5)-is activated, the vehicle ignition is deactivated and the vehicle itself is also stopped, it comprises the following steps:

- a) detecting a door opening and closing sequence,
- b) detecting a deactivating signal from a remote control, or key, included in electronic system-~~(6)~~, and
- c) ~~deactivate~~ deactivating said power supply (5)-following said detection.

32. (New) The control method according to claim 16, further comprising controlling said power supply, by means of said electronic device, also according to the condition, activated or deactivated, of the vehicle ignition.

Amendment to the Abstract:

The Abstract has been amended. A revised Abstract is attached.

Attachment

The invention relates to a system for controlling the operation of presence-detection devices and to the implementation method thereof. The inventive system comprises: external presence detection means ~~(4)~~ which are used to detect objects entering a determined surveillance area outside a motor vehicle and which are powered by a power source ~~(5)~~, an electronic system ~~(6)~~, and means ~~(7)~~ which are used to detect the state of a closure device belonging to a door of said vehicle and which are associated with and co-operate with the electronic system ~~(6)~~ in order to control the power source ~~(5)~~. Optionally, internal presence detection means ~~(8)~~ and inclination detection means ~~(9)~~, which are included in the system, can be taken into account when said control operation is being performed. The inventive system also varies the surveillance area and adapts same as a function of the inclination of the vehicle in relation to the ground plane. The invention also relates to a method which uses the inventive control system.